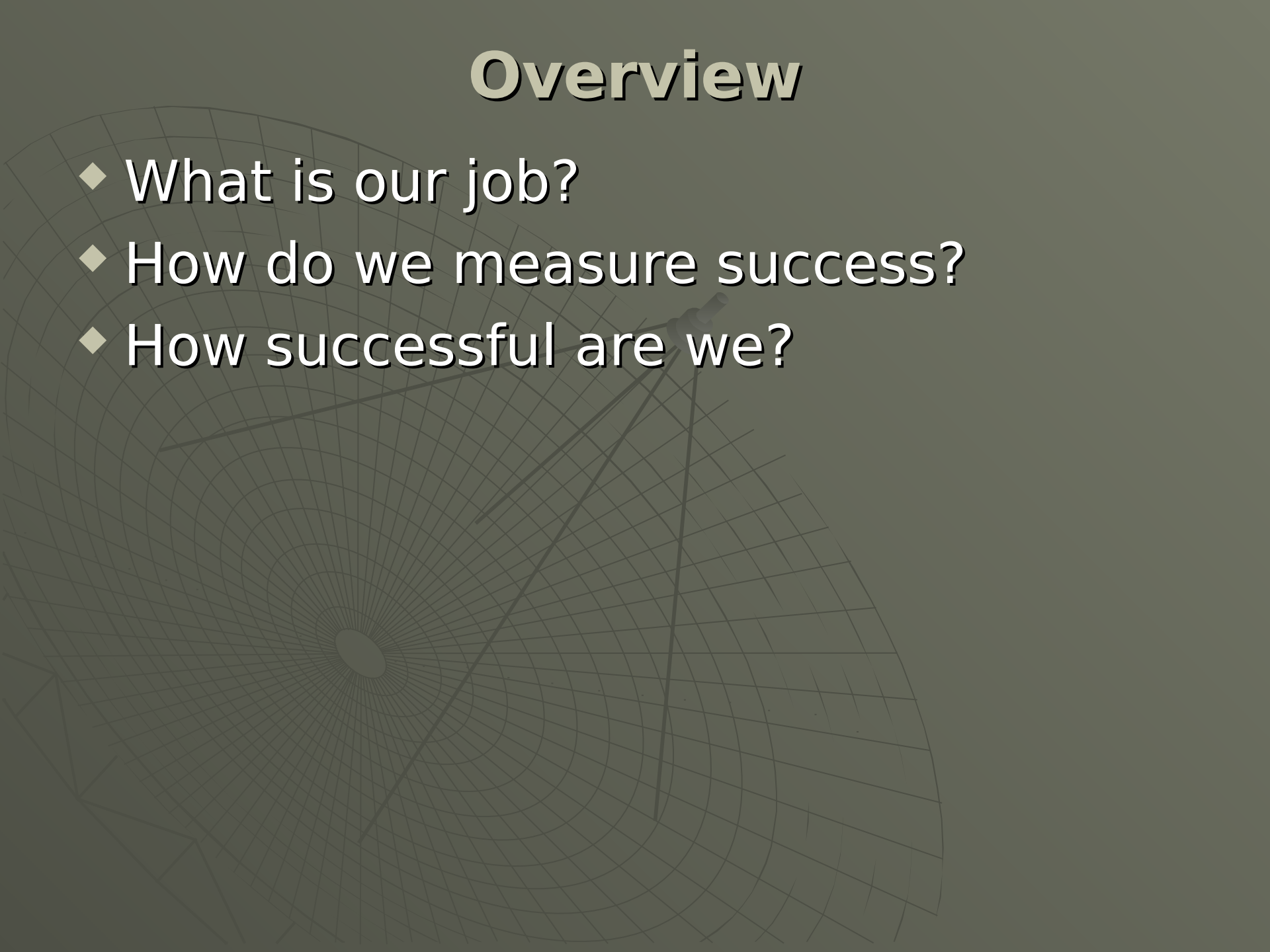# MOVES Program Officer

Academic Year 2004 Review

CDR Joe Sullivan

"What has modeling and simulation done for me lately?"

Overview

- What is our job?

- How do we measure success?

- How successful are we?

Research program

- Overview
  - Guided by advisory board
  - Funded by N6M, ONR, FAA, N81, …
  - Managed by technical directorate
  - Manned by students
- Result
  - Without peer as research institute
  - Highly focused research
  - Focus provided by warfighters sitting next to technical experts
- Hard part - matching students with topics
  - The MOVES seminar series

Educational program

Our Goal:
Provide a syllabus that meets Educational Skill Requirements and incorporates current technology squeezed into timeline that fits existing career path.

Zero-based review

Billet Descriptions

Educational Skill Requirements

1st Sea Tour	1st Shore Tour	2nd Sea Tour	NPS	3rd Sea Tour	Payback Tour ??

Moore's law Technological development

Does curriculum incorporate latest technology?

Education to support ESRs

- Changed to 'block' structure
  - Blocks align with focus areas
    - Defined by Advisory Board/Curriculum committee
    - Consist of 3-4 course series
    - Provide scheduling flexibility and *stability*
  - Agendas are clear and easier to adapt
    - Redefine and restructure blocks in response to evolution of technology and military roles.
    - Provides a framework to continually refine curriculum
- Course development course revisions keeping pace with technology
  - New courses
  - Revised syllabi

Block-structured curriculum

Training Systems

MV4002 Simulation and Training (core)
OA4403 Team Performance and Decision Making
OA4402 Skilled Operator Performance
MN4115 Training Foundations & Management

Human Factors

OA3401 Human Factors in System Design (core)
MV4001 Human Factors of Virtual Environments
OA3402 Human Performance Measurement
OA4401 Sensation, Perception, and Cognition

Optimization

OA3201 Linear Programming
OA4201 Nonlinear Programming
OA4202 Networks

Management & Acquisition

MN3331 Principles of Systems Acquisition and Program Management
MN3105 Organization & Management
Pick one from:
MN4602 Test and Evaluation Management ...

Web-Based Simulation

MV3204 Computer Graphics Modeling (core)
MV4205 Advanced Computer Graphics Modeling
MV3250 Introduction to XML Programming
MV4250 Advanced XML Design

Networked Visual Simulation

MV3202 Computer Graphics Programming (core)
MV3500 Inter-network Communication for Simulation
MV4470 Image Synthesis
MV4471 Computer Animation

Combat Modeling

OA4655 Introduction to Combat Modeling (core)
OA4656 Advanced Combat Models
OA4604 Wargaming
OA4602 Joint Campaign Analysis

Physically Based Modeling

MV3472 Introduction to Physically Based Modeling
MV4472 Advanced Physically Based Modeling
MV4471 Computer Animation

Agents & Cognitive Modeling

CS3310 Artificial Intelligence (core)
MV4015 Agent-Based Autonomous Behavior
MV4025 Cognitive and Behavioral Models for Simulations
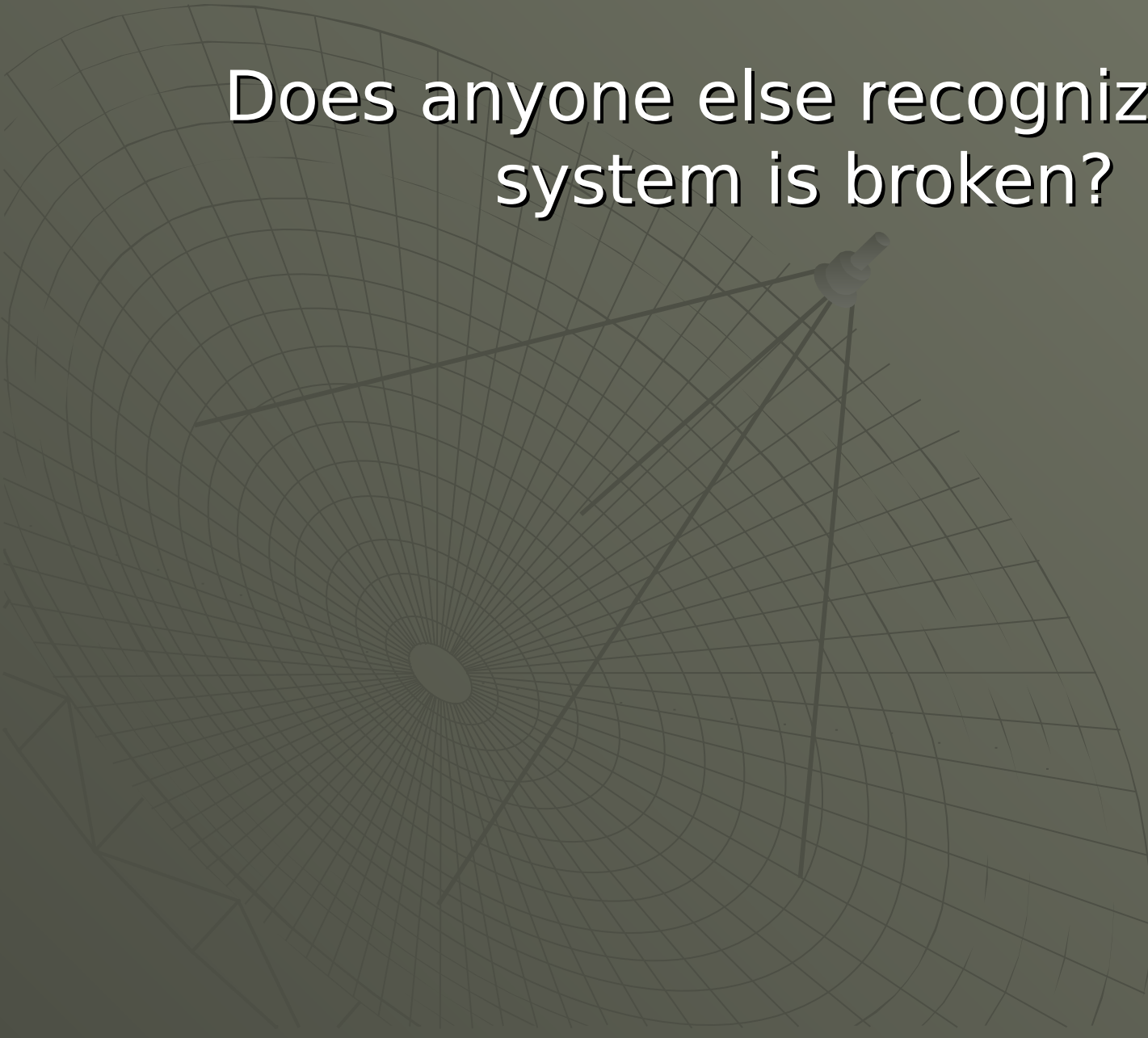MV4100 Cognitive Engineering

Education performance

- Are we providing the required educated officers?

- Adequately educating the officers assigned, but are we meeting the needs of the DoD?

Education today

- The Navy 'values' education
- Analogous to 'safety is paramount'
  - Safety isn't paramount
  - (if it were we would keep ships pier side)
- 'Show me' the value of education
  - Advancement
  - Placement
- We think highly of education but have a war to fight
  - Hard to argue against, but easy to over-apply the argument.
- Manning and education process is broken

Does anyone else recognize the system is broken?

Q:

What does the CNO write when an Army Captain, OH-58 pilot speaks?

A:

Details on the Army's FA-57 program and career track after asking a Navy URL what his post-NPS career path looked like.

Key questions and challenges...

- How many dollars does DoD invest in M&S?

- What educational resources does DoD invest in M&S?

- What is the cost of not having appropriate M&S knowledge base?

- How do we provide the right knowledge base within manpower constraints?

Probably not limited to this....

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Future education

- Distance learning
- Certificate programs
- Split tour
- Asynchronous learning

- Evolving in a environment that demands...
- CNO Goal #2 – "Revolution in Training"

Questions?

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"The Year"

- "Cause I don't need another fucking science project."

  - CO MAG-xx

- "If this doesn't do NVGs this is just bullshit."

  - CO MAG-xx

- "... Because we all know, elves in trees make simulators happen."

  - CO HMM(T)-xxx

- "I like it, it seems like a good idea, I just don't know how to use it to train people."

  - COMMO, USS xxx

- "What about degree programs just to help people?"

  - JO, USS xxx

- "Can you help me decide which flights to cut from my training syllabus."

  - Commodore TRAWING xxx

- "Does anyone know the difference between a motion based-trainer and fixed-base trainer?"

  - xxx Program Office

- "Do you think the Navy could use a program like the Army's FA-57 program?"

  - CNO

Block-structured curriculum

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MV4205 Advanced Computer Graphics Modeling
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MV4250 Advanced XML Design

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